Chapter 6

Reviewing Model Results

6.1 General

The major portion of the HEC-1 model results is in the form of an ASCII file, often referred to as the HEC-1 "Output File." This file includes an echo print of the users input data, intermediate simulation results, summary tables, and error messages. The degree of detail of virtually all of the program output can be controlled by the user.

Besides the normal HEC-1 output file, model results can be written to the HEC Data Storage System (HECDSS or just DSS). The DSS system stores data in a fashion convenient for inventory, retrieval, archiving, and model use. The DSS was primarily designed for water resources applications. Using DSS provides a means for storing and maintaining data in a centralized location, providing input to and storing output from applications programs, transferring data between application programs, and displaying the data in graphs and tables.

6.2 HEC-1 Formatted Output File

OUTPUT is the "print" file from HEC-1. Generally, this file would go directly to a disk file or to the printer. Because the printer is usually very slow, it is often easier to write the HEC-1 output to a disk file and review it with a program like LIST. There may be several computer runs required before the final results are obtained. By using the disk file approach, only the final results would be sent to the printer.

The OUTPUT file is easy to review from MENU1. Move the cursor to "**4. Display output to console**," and press **<ENTER>**. This will call LIST with the output filename. Portions of the output file can be printed from LIST; **P** turns the printer on or off. Press **<F1>**, while in LIST, to see available LIST commands.

The entire output file can be sent to the printer from MENU1. At "**4. Display output to console**" press the **<SPACE BAR>** to display "**Display output to printer**," and press **<Enter>**. This will send the output file to the printer with the utility program PROUT. PROUT will recognize the carriage control characters in the output file and thus provide spacing and paging as a high-speed printer would. PROUT output can be set to eighty or 132 columns. PROUT does not set the printer width; that must be done external to the program.

The DOS COPY command can be used to send the output file to the printer (e.g., COPY A:HEC101.OUT PRN). As with PROUT, this will tie up the computer while the file is printing. Alternatively, the DOS PRINT command can be used (e.g., PRINT A:HEC101.OUT). The system will request the name of the print device; simply press **<ENTER>** to send the output to the printer. This

approach does not tie up the computer. However, neither of the above approaches will allow your printer to recognize the print control characters in column one of the output file. Therefore, the printed output will not start a new page or skip a line the way the file would be normally printed if directed to the printer at the time of execution.

To use PROUT as a separate program, at the DOS prompt enter:

PROUT "filename" "column width"

where: "filename" is the output file to print
"column width" is the column width for the printer

(e.g., PROUT A:HEC101.OUT 132)

6.3 Using DSPLAY to Generate Graphs and Tables

In the case that model results have been stored in a DSS file, the DSS utility program DSPLAY can be used to dsplay the data in tables and graphs. Appendix B provides an overview of DSPLAY for the PC. Detailed information about DSPLAY can be found in the HECDSS Users Guide and Utility Program Manuals.

DSPLAY uses proprietary "drivers." Drivers provide a means of plotting on several different types of devices (monitors, pen plotters, printers, etc.), without having information about each device in the program. More information about the drivers can be found in "Installation Instructions for Device Drivers."

6.4 Using HEC-1 and DSPLAY Output in Other Programs

HEC-1 and DSLPAY output can be incorporated into documents via word processors or used in spreadsheets and graphics packages. Procedures for importing text and graphics files into other programs will vary across programs. Refer to their respective manuals for more information. The following paragraphs highlight some concepts related to incorporation of HEC-1 and DSPLAY output into other programs.

The HEC-1 output file is an ascii text file that can be used in other programs that allow importation of text. In the case of word processors, there are a few generic tips that will facilitate the process. When selecting the method of bringing text into your word processor, choose to have carriage return/ line feed combinations converted to "hard" returns to avoid unintentional concatenation of lines. Similarly, select a font that is monospaced (i.e., not proportional spaced) so that the HEC-1 output will not be distorted. If the entire width of an HEC-1 output file is to be used in the context of an 8 1/2 by 11 inch page, a small font, such as 16.6 characters per inch, and reduced margins will be needed because the HEC-1 output is 132 columns wide. Once the HEC-1 output file is in your word processor, it can be printed or altered.

Any graph or table that can be generated and shown on the screen by DSPLAY can also be generated and sent to a CGM graphics file instead. This enables the use of DSPLAY output in other graphics programs or word processors that use the CGM file format. To generate a CGM file in DSPLAY, the DEVICE command is used with the META parameter before the desired PLOT or TABULATE commands are issued. Refer to the HECDSS Users Guide and Utility Program Manuals for more information on the DEVICE command.